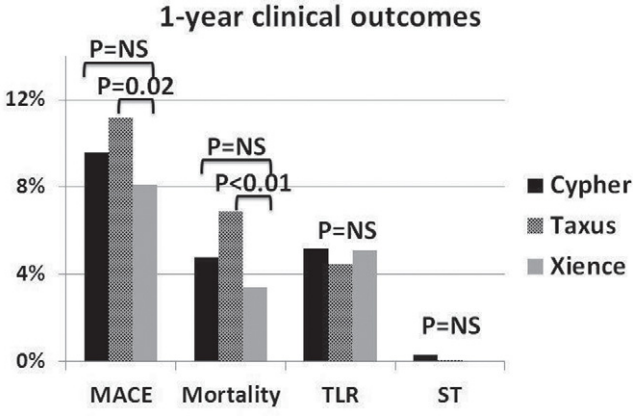
for clinical characteristics, Xience stent utilization was no longer associated with improved outcome.



Conclusion: The use of Xience in routine clinical practice is both safe and effective and has borderline clinical advantage over first-generation stents.

TCT-226

Five Year Survival After Percutaneous Coronary Intervention With Drug Eluting Stents And Bare Metal Stents In All-Comers. A New Jersey Statewide Database Study

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Background: Drug eluting stents (DES) have been shown to significantly decrease restenosis with subsequent need for lesion and/or vessel revascularization when compared with bare metal stents (BMS) in selected patient groups in randomized trials and in observational registries. If their use in all-comers is also associated with a survival benefit over a longer follow-up is controversial.
Methods: We used the Myocardial Infarction Data Acquisition System (MIDAS), a New Jersey statewide database, to examine the mortality of 37,812 patients (pts) who underwent PCI (emergent or elective) with a single stent, either BMS (n=14,939) or DES (n=22,873) from 2003 to 2004, with follow-up of 60 months.
Results: The total mortality and the cardiovascular death were significantly lower (13.63% vs. 18.67%; p<0.0001), and (5.85% vs. 9.17%; p<0.0001) respectively among patients who received DES compared to BMS. After adjusting for baseline characteristcs such as age, sex, race, diabetes, hypertension, renal disease, anemia, cancer, cerebrovascular disease and left ventricular dysfunction the benefits associated with DES persisted; the hazard ratios for total mortality and cardiovascular mortality were 0.78 (95% CI 0.73 to 0.89; p<0.0001) and 0.77 (95% CI 0.67 to 0.89; p=0.0004) respectively.
Conclusion: In this population based observational study, patients who received DES had significantly lower 5 year total and cardiovascular mortality than those who received BMS.

TCT-227

Validation of Age, Creatinine, and Ejection Fraction Score As a Risk Assessment Tool In Patients Undergoing Stent Implantation During Percutaneous Coronary Intervention. A Report from the Dynamic Registry of the National Heart, Lung, and Blood Institute

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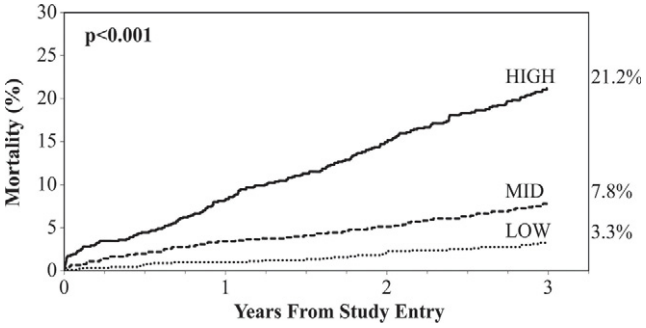
Background: Previous studies have demonstrated the potential utility of the age, creatinine, and ejection fraction (ACEF) score [age/(left ventricular ejection fraction + 1, if creatinine > 2.0 mg/dL)] to assess the risk of mortality and myocardial infarction (MI) 1 year after percutaneous coronary intervention (PCI). However, this score has not been extensively validated in patients undergoing PCI in routine clinical practice. Therefore, we sought to investigate if the ACEF score would predict adverse events in patients undergoing contemporary PCI.
Methods: A total of 2779 patients, who received at least one stent during PCI and of whom data was available to calculate the ACEF score, were selected from Waves 4 (2004) and 5 (2006) of the NHLBI Dynamic Registry. The in-hospital and 3-year outcomes (mortality and MI) were prospectively collected and stratified according to the ACEF score tertiles.
Results: The ACEF terciles were as follow: LOW <1.0477, 1.0477≤ MID <1.3819, and HIGH ≥1.3819. An increasing trend in ACEF score was associated with increases in inhospital mortality (LOW = 0%, MID = 0.4%, HIGH = 2%; ptrend <0.0001). Similarly, HIGH had the highest mortality at 3-year follow-up (figure). After adjustment for confounding variables, the relationship between high ACEF score and mortality at 3 years remained statistically significant.



3-year cumulative mortality by ACEF tercile.

Conclusion: The ACEF score may serve as a risk assessment tool for mortality after PCI. Future studies are needed to better determine the use of ACEF score in routine clinical practice.

TCT-228

Four-year Follow-up of the SYNTAX Trial: Optimal Revascularization Strategy in Patients with Three-vessel Disease and/or Left Main Disease

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Background: The SYNTAX trial was designed to compare percutaneous coronary intervention (PCI) with paclitaxel-eluting TAXUS Express stents versus coronary artery bypass surgery (CABG) for the treatment of 3-vessel (3VD) and/or left main coronary disease (LM). This analysis compares outcomes at 4 years.
Methods: SYNTAX is a randomized clinical trial with nested registries. A cardiac surgeon and interventional cardiologist screened consecutive patients with de novo 3VD and/or LM disease. The patient was randomized if amenable for equivalent revascularization with both treatments; otherwise, they were enrolled in a nested registry.
Results: At 1 year, MACCE and repeat revascularization were significantly higher in the PCI group. The rate of death/stroke/MI was similar between groups. After 3 years of follow-up, MACCE, repeat revascularization, MI and cardiac death were significantly increased in the PCI arm (Table). Death/stroke/MI and stroke were similar between the groups at 3 years (Table). MACCE at 3-years was similar between treatment arms in patients with low/intermediate SYNTAX Scores but significantly increased in PCI patients with high SYNTAX Scores. The full 4 year results will be available at the time of presentation.

Adverse Event Rates in the Overall Randomized Controlled Trial Cohort at 3 years

3-year Rates	CABG	PCI		CABG	PCI
MACCE	20.2	28.0*	Stroke	3.4	2.0
Death/Stroke/MI	12.0	14.1	MI	3.6	7.1*
Death	6.7	8.6	Repeat Revascularization	10.7	19.7*
Cardiac Death	3.6	6.0*	Graft Occlusion or Stent Thrombosis	3.2	4.1

Subgroup comparison of outcome based on SYNTAX Score 0-32 versus ≥33

MACCE	CABG	PCI		CABG	PCI
0-32	20.6	25.1	33+	19.5	34.1*

MACCE: Major adverse cardiac and cerebrovascular events including all-cause death, stroke, MI, repeat revascularization. Time-to-event rates at 3 years. *p<0.05 from log-rank or chi-square test.

Conclusion: This will be the first presentation of 4-year outcomes in the randomized SYNTAX patient population. Three-year results suggest that CABG remains the standard of care for patients with complex lesions (high SYNTAX Score). With less complex disease (low/intermediate SYNTAX Scores), PCI may be an acceptable revascularization alternative.

POSTERS